

**UNITED STATES DEPARTMENT OF COMMERCE****United States Patent and Trademark Office**

Address: COMMISSIONER OF PATENTS AND TRADEMARKS
Washington, D.C. 20231

MF

G

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
-----------------	-------------	----------------------	---------------------

09/159,817 09/23/98 WESEL

E PD-980189

020991 WM01/0410
HUGHES ELECTRONICS CORPORATION
PATENT DOCKET ADMINISTRATION
BLDG 001 M/S A109
P O BOX 956
EL SEGUNDO CA 90245-0956

EXAMINER

GESESSE, T

ART UNIT

PAPER NUMBER

2683

DATE MAILED:

04/10/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

48

Office Action Summary

Application No.
09/159,817

Applicant(s)
Ellen K. Wesel

Examiner
Gesesse, Tilahun

Group Art Unit
2683



☒ Responsive to communication(s) filed on Dec 26, 2000

☒ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire three month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 1-30 is/are pending in the application.

Of the above, claim(s) 11-30 is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1-10 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

☐ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☒ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

Art Unit: ~~2746~~ 2683

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 5-6 and 9-10 are rejected under 35 U.S.C. 102(b) as being anticipated by *Rouffett et al* (US 5,410,731).

As per claims 1 and 5-6, *Rouffett et al* disclose a satellite system (a direct television broadcasting satellite facility) operating over a land mass, see fig.1,

Rouffett et al disclose a first satellite (S1) generating a first plurality of spot beams directed at said land mass (F1,F2), said first set of spot beams (F1, F'1) partially covering said land mass(coverage areas T1),

Rouffett et al disclose a second satellite (S2) generating a second plurality of spot beams (F'1 and F'2); said first plurality of spot beams and said second plurality of spot beams in combination provide substantially ubiquitous coverage over the land mass, see fig.1).

As per claims 9-10, *Rouffett et al* disclose at least one of said plurality of beam portions being independently adjustable in response to a condition (five others are used via beam F2 as backup channels for area T2, and can therefore, retransmit all or any of the five channels C6 to C10 --- the last two amplifiers, which may be omitted in another configuration but which are very

Art Unit: 2746

useful when the facility reaches middle age as is explained below, may be used as redundancy for tubes or channels so as to make up for failure in the beam F1 or even in the backup beam F2, see col. 3 lines 8-41.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Rouffett et al* (US 5,410,731) in view of *Lynch* (US 6,002,916).

As per claims 2-3, *Rouffett et al* fail to disclose MEO and GEO/IGSO group of satellites. However, *Lynch* discloses the server satellites are preferably positioned in a clarke or geosynchronous earth orbit (GEO) and in a medium earth orbit (MEO) or low earth orbit(LEO) or any combination of GEO,MEO or LEO, see col. 5 lines 24-28. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention was made to modify Rouffett in teaching MEO and GEO group satellites, in order to communicate at different elevation of the earth depending on the coverage of land mass and density of users in the area.

As per claim 4, *Rouffett et al* fails to disclose the spot beams are K band. However, *Lynch* discloses telemetry and control data is communicated across the up/down link using RF

Art Unit: 2746

unified Ka-band (or S-band as an option) comm link, see col. 7 ln 2-4. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention was made to modify Rouffett in utilizing Ka band in the data communication, as disclosed by Lynch , in order to transmit data with a high data rate spot beam.

5. Claims 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Rouffett et al* in view of *Diekelman* (US 5,612,701).

As per claim 7, *Rouffett et al* fail to disclose at least one of said first plurality of spot beams having a plurality of beam segment portions. However, *Diekelman* discloses at least plurality of spot beams (beam 72) having a plurality of beam segment portions (the beam coverage 72 has been segment in four portions, see fig.6). Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention was made to modify Rouffett, in teaching of a beam coverage area divided into segment portions, as disclosed by Diekelman , in order to optimize the communication service by sectoring an area of a beam coverage.

As per claim 8, *Rouffett et al* fail to disclose the plurality of beam segment portion being adjustable in response to a condition. However, *Diekelman* discloses the adjustment of beam 72 due to the third CU request access to the communication system , the system then ascertains the location of third CU 82 and determines whether first service beam 72 can be moved to service first CU 80, second CU81 and third CU 82, see fig.7 and it's disclosure. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention was made to modify

Art Unit: 2746

Rouffett in adjusting based on condition at the ground, as disclosed by Diekelman, in order to cover the uncovered area access request and optimize communication.

Response to Arguments

6. Applicant's arguments filed on Dec.26,2000 have been fully considered but they are not persuasive because of the following reasons:

Applicant argued grossly that Rouffett fails to anticipate the claimed invention. However, *Rouffett et al* disclose every element of applicant's invention, Rouffett et al teach satellite telecommunications facility capable of covering a plurality of coverage areas(11 and 12) using first satellite (S1) and second satellite (S2), the first satellite S1 has plurality of beams (F1 and F2) and second satellite S2 has plurality of beams (F'1 and F'2) their combined beams covering two separate land masses (T1 and T2) providing ubiquitous coverage over the land masses, see fig.1.

Applicant argued that the Rouffett reference specifically teach system that is used for direct television broadcasting, see page 2 lines 25-26.

However, applicant's claim, "A satellite system operating over al land mass"broad recitation of the invention.. Applicant has not been specific and it is simply a satellite system operating over a land mass, such broad recitation would mean a broadcasting , a repeater or communication system.

Therefore, Rouffett et al teaching a system that is used for direct television broadcasting, reads on applicant claim invention.

Art Unit: 2746

Applicant admitted that Rouffett discloses two satellites and a system that directs a first beam for primary coverage and has a second beam that provides redundant coverage and primary beam of another satellite, see page 2 lines 24-28.

Hence, upon the above teaching of the prior art, *Rouffett et al.* anticipates the applicant's claim invention and the rejection has been maintained.

Conclusion

7. THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any response to this action should be mailed to:

Commissioner of Patents and Trademarks

Washington, D.C. 20231

or faxed to:

Art Unit: 2746

(703) 308-9051, (for formal communications intended for entry)

Or:

*(703) 305-9508 (for informal or draft communications, please
label "PROPOSED" or "DRAFT")*

*Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive,
Arlington. VA., Sixth Floor (Receptionist).*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tilahun Gesesse whose telephone number is (703) 308-5873.. The examiner can normally be reached on Monday-Thursday from 6:30 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Trost, can be reached on (703) 3085318 The fax phone number for this Group is (703) 308-6306 or (703) 308-6296.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-3900.

Feb. 23, 2001

Tilahun Gesesse

**TILAHUN GESESSE
PATENT**

W. Trost

**WILLIAM TROST
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600**